



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
LITTLE KERN GOLDEN TROUT
Oncorhynchus aguabonita whitei



CLASSIFICATION: Threatened

Federal Register 43:15427; April 13, 1978

http://ecos.fws.gov/docs/federal_register/fr201.pdf

CRITICAL HABITAT: Designated

Federal Register 43:15427; April 13, 1978

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RECOVERY PLAN: State plan accepted as recovery plan

The revised fishery management plan for the Little Kern golden trout. California Department of Fish and Game. 1984.

DESCRIPTION

The Little Kern golden trout is a member of the Salmonidae (trout and salmon) family. It is a brightly colored fish with profuse spots on the back and tail. The belly and cheeks are red to red-orange. The lower sides are bright gold. The lateral band is red-orange. The back is olive green. Pectoral, pelvic, and anal fins are orange, with white tips. Little Kerns typically retain up to 10 parr marks (vertical dark oval spots) on each side as adults. They average 5 to 7 inches (about 13 to 18 cm) in length.

The Little Kern subspecies is distinguishable from the South Fork of the Kern golden trout (*Oncorhynchus aguabonita aguabonita*) primarily by spotting characteristics and parr marks. Unlike the South Fork subspecies, the Little Kern typically has many spots on the head and below the lateral line. The parr marks are arranged vertically on both sides of the body with an intermediate row of smaller ones often occurring just below the main row.

Little Kern golden trout spawn just after snowmelt in late May or early June. Females contain between 41 and 65 eggs per year, and develop new eggs soon after spawning for next season. The eggs hatch after about 26 days in water between 12 and 16 degrees Celsius (54 and 61 degrees Fahrenheit). Spawning gravel has been found to be between 5 and 10 millimeters (.2 and .4 inches) diameter in water between 5 and 15 centimeters (2 and 6 inches) deep.

Important habitat components for Little Kerns likely include pools, instream cover, substrate embeddedness, stream shade, isolation from exotic species, and clean, clear, cold water. Little Kerns have been shown to preferentially use lateral scour pools with undercut banks within their habitat. They feed on both aquatic invertebrates and terrestrial drift.

The population dynamics of Little Kerns are not well studied. California golden trout (*Oncorhynchus mykiss aguabonita*), a closely related subspecies have long lives (up to nine years) and slow growth rates. They reach reproductive maturity at 3-4 years. California golden

trout populations have been shown to be limited by spawning habitat and to have slower growth rate at higher density.

DISTRIBUTION

The Little Kern golden trout is native to the Little Kern River and its tributaries in the Sierra Nevada range, Tulare County, California. The Little Kern is a tributary of the Kern River. The elevation of the Little Kern is 6,000 to 10,000 feet. Most of the river is within the Sequoia National Forest and Sequoia National Park.

Transplants drastically altered the species' range. Early anglers made "coffee pot" transfers that established it in waters outside its historic range. Later transplants of nonnative trout into the Little Kern River basin displaced the species from many of its historic habitats. Recovery efforts by the Department of Fish and Game, Forest Service, and National Park Service have restored Little Kern golden trout to parts of its historic range.

THREATS

The primary cause of decline in Little Kern golden trout was hybridization with non-native rainbow trout. The California Department of Fish and Game has attempted to remove hybrid fish and replace them with pure stock within the Little Kern drainage, but this has not been completely achieved. Further genetic testing from trout sampled throughout the Little Kern drainage is needed before the current status of the species can be accurately assessed. Unauthorized transplantation and upstream migration of non-native fish remains a concern.

The vast majority of the Little Kern drainage is within the Golden Trout Wilderness, and therefore protected from mechanized effects, such as road building, off highway vehicle use, and timber harvest. Only the headwaters of Clicks Creek and Fish Creek, which are tributaries of the Little Kern River, are outside the Wilderness Area. Little Kerns within and downstream of those areas would be vulnerable to improper forest management practices which could cause increases in water temperature, water pollution, or siltation.

Livestock grazing may cause decline in habitat quality for trout through reductions in riparian vegetation and increases in erosion. Effects on fish habitat can include nutrient loading, reduction of shade and cover with resultant increases in water temperature, more intermittent flows, changes in stream channel morphology, and the addition of sediment due to bank degradation and off site erosion. Livestock grazing can affect riparian areas by changing, reducing or eliminating vegetation, compacting soils, trampling stream banks, wading in streams, and by the actual loss of riparian areas through channel widening, channel degradation or lowering of the water table. Removal of stream bank vegetation through grazing decreases shade and cover which promotes greater temperature fluctuations, reduced allochthonous inputs, decreased water storage capacity, and increased erosion potential. Wading livestock may also produce direct mortality of Little Kern golden trout eggs and pre-emergent fry. Cattle grazing is permitted within the critical habitat of the Little Kern golden trout on Forest Service lands.

Approximately 150 miles of recreational hiking and packstock trails are located in the Sequoia National Forest and Monument section of the Golden Trout Wilderness. Recreational activities may have significant negative effects on wildlife and their habitats; and recreation is the fastest growing use of National Forests. Pack stock grazing likely has effects similar to livestock grazing on Little Kern golden trout and aquatic and riparian habitat, although duration and intensity of the effects may vary. Human and pack stock traffic also cause increased erosion,

especially where trails cross creeks. Nutrient loading and bacterial inputs from human and pack stock wastes may reduce water quality.

Angling for Little Kern golden trout is permitted within the Golden Trout Wilderness. Angling for the species is not permitted within the portion of native range in Sequoia National Park. Little Kern golden trout populations are vulnerable to over harvest by anglers.

REFERENCES FOR ADDITIONAL INFORMATION

Christenson, Daniel P. 1984. The revised fishery management plan for the Little Kern golden trout. CA Dept. Fish and Game, Fresno.

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Last updated October 26, 2007